

## Voice Recognition System Method and Apparatus

### Abstract

An improved system for an interactive voice recognition system (400) includes a voice prompt generator (401) for generating voice prompt in a first frequency band (501). A speech detector (406) detects presence of speech energy in a second frequency band (502). The first and second frequency bands (501, 502) are essentially conjugate frequency bands. A voice data generator (412) generates voice data based on an output of the voice prompt generator (401) and audible speech of a voice response generator (402). A control signal (422) controls the voice prompt generator (401) based on whether the speech detector (406) detects presence of speech energy in the second frequency band (502). A back end (405) of the interactive voice recognition system (400) is configured to operate on an extracted front end voice feature based on whether the speech detector (406) detects presence of speech energy in the second frequency band (502).